

R_3 is H, C₁₋₆ alkyl, phenyl, or benzyl;

each of R_5 , R_6 , R_7 and R_8 is independently H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, or amino, with the proviso that R_7 is methyl;

one of R_a , R_b , R_c , R_d , and R_e is -WYZ and the others are independently selected from H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, and amino;

W is R_9 -O- R_9 , NR_{10} , ~~(CO)(O) R_9 , N(R_{10})SO₂- R_9 , O(CO) R_9 , (CO)NR₁₀, or N(R_{10})CO- R_9~~ , wherein R_9 is C₁₋₆ alkylene, C₂₋₆ alkynylene, C₂₋₆ alkenylene, phenylene, or C₂₋₅ heterocyclic bivalent radical, and R_{10} is H, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, phenyl, or C₂₋₅ heterocyclic radical;

Y is absent, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, or C₁₋₆ alkoxy;

Z is C₂₋₈ heterocyclic radical with at least one basic nitrogen atom in the ring, optionally including in the ring up to 3 additional heteroatoms or moieties independently selected from O, C=O, N, NH, NG, S, SO, and SO₂, wherein G is R_{15} , COR₁₅, COOR₁₅, SO₂R₁₅, SO₂N or CSR₁₅; or Z is $NR_{11}R_{12}$ where each of R_{11} and R_{12} is independently selected from H, C₁₋₆ alkyl, phenyl, benzyl, C₃₋₈ cycloalkyl, and C₂₋₅ heterocyclic radical; and R_{15} is C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, C₃₋₇ cycloalkyl, or C₄₋₇ cycloalkenyl;

provided that where R_6 is $WNR_{11}R_{12}$, each of R_{11} and R_{12} being independently selected from C₁₋₆ alkyl, then at least one of the following is true: R_b or R_d is alkyl, alkoxy, amino, or halo; the dashed lines represent one carbon-carbon double bond or are absent; R_a or R_e is alkyl, alkoxy, amino, or halo; or W is R_9 , NR_{10} , ~~(CO)(O) R_9 , O(CO) R_9 , (CO)NHR₉, or N(R_{10})(CO) R_9~~ ;

and further provided that where each of R_a , R_b , R_d , and R_e is H, and W is a straight chain, unsubstituted alkoxy, then at least one of the following is true: Z is cyclic; the dashed lines represent one carbon-carbon double bond or are absent; or R_7 or R_8 is alkyl, alkoxy, halo, or amino;

and further provided that where each of R_a , R_b , R_d , and R_e is H, and W is a straight chain, unsubstituted propoxy, then YZ is not N-piperidyl or N-morpholinyl; and

each of the above hydrocarbyl or heterocyclic groups being optionally substituted with between 1 and 3 substituents selected from C₁₋₃ alkyl, halo, hydroxy, C₂₋₅ heterocyclic radical, phenyl, and phenyl(C₁₋₃ alkyl); and wherein each of the above heterocyclic groups may be attached to the rest of the molecule by a carbon atom or a heteroatom; or a pharmaceutically acceptable salt, amide, ester, or hydrate thereof.

2. (currently amended) A compound of claim 1, wherein Z comprises piperidyl, morpholinyl, benzyl-amino, phenyl-amino, substituted benzyl-amino, piperazinyl, pyrrolidyl, or a C₆₋₈ cycloalkylimino radical.

3. (deleted)

3 ~~4~~. (original) A compound of claim 1, wherein W is hydroxy-substituted C₂₋₄ alkoxy, ^{or} C₂₋₄ alkoxy, ~~C₂₋₄ alkylamino, butenyl, or butynyl.~~

4 ~~5~~. (currently amended) A compound of claim 1, wherein W comprises propoxy, ^{or} ethoxy, ~~propylamino, or ethylamino;~~ and one of R_7 and R_8 is methyl.

6. (deleted)

5 ~~7~~. (original) A compound of claim 1 wherein at least one of R_a , R_b , R_d , and R_e is methyl.

6 ~~8~~. (currently amended) A compound of claim 1, wherein each of R_5 , R_6 , R_7 and R_8 is independently H, methyl, ethyl, methoxy, ethoxy, fluoro, or chloro; or wherein one of R_a , R_b , R_c , R_d , and R_e is WZ

and the others are independently selected from H, methyl, ethyl, methoxy, ethoxy, fluoro, or chloro; or both.

7 9. (original) A compound of claim 1, wherein both dashed lines are present to form two carbon-carbon double bonds.

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8 10. (original) A compound of claim 1, wherein both dashed lines are absent.

9 11. (original) A compound of claim 1, wherein R_a or R_e is methyl, fluoro, or methoxy.

10 12. (original) A compound of claim 1, provided that where each of R_a , R_b , R_d , and R_e is H, and W is a straight chain, unsubstituted alkoxy; then at least ^{one} ~~two~~ of the following ^{is} ~~are~~ true: Z ~~is cyclic~~; at least one of the dashed lines is absent; and R_7 or R_8 is methyl.

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13. (deleted)

11 14. (currently amended) A compound of claim 1, wherein

R_3 is H or methyl;

each of R_b and R_d is independently H, methyl, or methoxy;

~~each of R_7 and R_8 is independently H, methyl, fluoro, or chloro;~~

each of R_5 and R_6 is H;

each of R_a or R_e is independently H, methyl, fluoro, or chloro;

W is C₂₋₄ alkoxy, ~~C₄ alkylene, C₄ alkynylene, C₄ alkenylene,~~

~~N(R_{10})SO₂-(C₁₋₃ alkyl), -(CO)O-C₂₋₃ alkyl, (CO)NH-(C₁₋₃ alkyl),~~

~~-NH(CO)(C₁₋₃ alkyl), or -NH(C₁₋₆ alkyl); and~~

Z is pyrrolidyl, piperidyl, morpholinyl, piperazinyl, (piperidyl)-

~~piperidyl, or -NR₁₁R₁₂ where each of R_{11} and R_{12} is independently~~

~~selected from H, C₁₋₅ alkyl, phenyl, benzyl, C₃₋₈ cycloalkyl, and~~

~~C₂₋₅ heterocyclic radical, but at least one of R_{11} and R_{12} is not~~

~~H; or taken together, R_{11} and R_{12} with the N to which they are~~

~~attached form a C₆₋₈ cycloalkylimino radical.~~

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15. (deleted)

¹²~~16~~. (currently amended) A compound of claim 2, selected from 2-(4-Piperidinopropoxy-2-methylphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-^{hexamethylene imino}Cycloheptylamino)propoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-[4-Piperidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Pyrrolidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; and 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-imidazo[1,2-a]pyridine; 2-[4-[4-Pyrrolidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; and 2-(4-Piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine.

¹³~~17~~. (currently amended) A compound of ~~claim 2~~, selected from N,N-Diethyl-N'-[4-(7-methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; and 7-methyl-2-[2-methyl-4-(3-piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; and N,N-Diethyl-N'-[4-(8-methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-ethane-1,2-diamine.

¹⁴~~18~~. (original) A compound of claim ¹²~~16~~, having the formula 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine.

¹⁵~~19~~. (currently amended) A pharmaceutical composition comprising a compound of formula claim 1 (I) and a pharmaceutically-acceptable carrier.

¹⁶~~20~~. (currently amended) A pharmaceutical composition of claim ¹⁵~~19~~, wherein said compound has a formula wherein R₃ is H or methyl; each of R_b and R_d is independently H, methyl, or methoxy; each of R₇ and R₈ is independently H, methyl, fluoro,

or chloro; each of R_5 and R_6 is H; each of R_a or R_e is independently H, methyl, fluoro, or chloro; W is C_{2-4} alkoxy, C_4 alkylene, C_4 alkynylene, C_4 alkenylene, ~~$(CO)O-C_{2-3}$ alkyl, $N(R_{10})SO_2R_9$, $(CO)NH-(C_{4-3}$ alkyl), $NH(CO)(C_{1-3}$ alkyl), or $NH(C_{1-6}$ alkyl); and Z is pyrrolidyl, piperidyl, morpholinyl, piperazinyl, (piperidyl)-piperidyl, or $NR_{11}R_{12}$ where each of R_{11} and R_{12} is independently selected from H, C_{1-5} alkyl, phenyl, benzyl, C_{3-8} cycloalkyl, and C_{2-5} heterocyclic radical, but at least one of R_{11} and R_{12} is not H; or taken together, R_{11} and R_{12} with the N to which they are attached form a C_{6-8} cycloalkylimino radical.~~

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17 ¹⁶ 21. (currently amended) A pharmaceutical composition of claim 20, wherein said compound has a formula selected from 2-[4-[3-(Piperidino)propylamino]phenyl]-7-methylimidazo[1,2-a]pyridine; (E/Z)-2-[4-[4-Piperidinobut-1-enyl]phenyl]-7-methylimidazo[1,2-a]pyridine; [4-(8-Methylimidazo[1,2-a]pyridin-2-yl)phenyl]-(2-pyrrolidin-1-yl-ethyl)-amine; [4-(8-Methylimidazo[1,2-a]pyridin-2-yl)phenyl]-(2-piperidin-1-yl-ethyl)-amine; 2-[4-[4-Pyrrolidinobutyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-[4-[2-(1-Methyl)-2-pyrrolidino]ethoxy-3-methylphenyl]imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methylimidazo[1,2-a]pyridin-2-yl)phenyl]propane-1,3-diamine; 2-(4-Piperidinopropoxy-2-methylphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-hexamethyleneimino-cycloheptylamino)propoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-[4-Piperidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Pyrrolidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; and 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]imidazo[1,2-a]pyridine; 2-[4-[4-Pyrrolidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(7-methylimidazo[1,2-a]pyridin-2-yl)phenyl]propane-1,3-diamine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-

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5,6,7,8-tetrahydroimidazo[1,2-a]pyridine; 7-methyl-2-[2-methyl-4-(3-piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydroimidazo[1,2-a]pyridine; and N,N-Diethyl-N'-[4-(8-methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-ethane-1,2-diamine.

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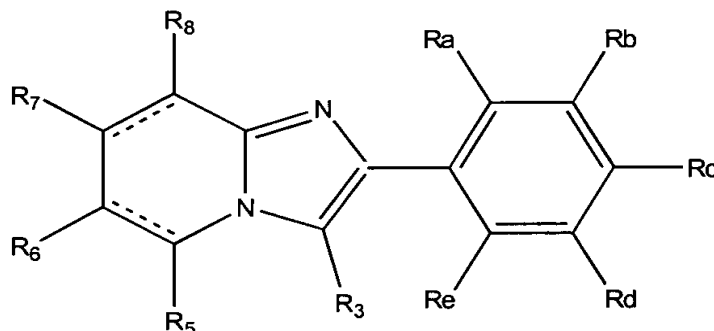
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22. (original) A pharmaceutical composition of claim 20, wherein said compound is 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine.

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23. (currently amended) A method for treating disorders mediated by the histamine H₃ receptor in a patient, said method comprising administering to the patient a pharmaceutically effective amount of compound of formula (I):



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independently each

completes

wherein both dashed lines are a carbon-carbon double bond, or both are absent;

R₃ is H, C₁₋₆ alkyl, phenyl, or benzyl;

each of R₅, R₆, R₇ and R₈ is independently H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, or amino;

one of R_a, R_b, R_c, R_d, and R_e is -WYZ and the others are independently selected from H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, and amino;

W is R₉, O-R₉, NR₁₀, (CO)(O)R₉, N(R₁₀)SO₂-R₉, O(CO)R₉, (CO)NR₁₀, or N(R₁₀)CO-R₉, wherein R₉ is C₁₋₆ alkylene, C₂₋₆ alkynylene, C₂₋₆ alkenylene, phenylene, or C₂₋₅ heterocyclic bivalent radical, and R₁₀ is H, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, phenyl, or C₂₋₅ heterocyclic radical;

Y is absent, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, or C₁₋₆ alkoxy;
 Z is C₂₋₈ heterocyclic radical with at least one basic nitrogen atom in the ring, optionally including in the ring up to 3 additional heteroatoms or moieties independently selected from O, C=O, N, NH, NG, S, SO, and SO₂, wherein G is R₁₅, COR₁₅, COOR₁₅, SO₂R₁₅, SO₂N or CSR₁₅; or Z is ~~NR₁₁R₁₂ where each of R₁₁ and R₁₂ is independently selected from H, C₁₋₆ alkyl, phenyl, benzyl, C₃₋₈ cycloalkyl, and C₂₋₅ heterocyclic radical; and R₁₅ is C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, C₃₋₇ cycloalkyl, or C₄₋₇ cycloalkenyl;~~

~~provided that where R₆ is WNR₁₁R₁₂, each of R₁₁ and R₁₂ being independently selected from C₁₋₆ alkyl, then at least one of the following is true: R_b or R_d is alkyl, alkoxy, amino, or halo; the dashed lines represent one carbon-carbon double bond or are absent; R_a or R_e is alkyl, alkoxy, amino, or halo; or W is R₉, NR₁₀, (CO)(O)R₉, O(CO)R₉, (CO)NHR₉, or N(R₁₀)(CO)R₉;~~

~~and further provided that where each of R_a, R_b, R_d, and R_e is H, and W is a straight chain, unsubstituted alkoxy, then at least one of the following is true: Z is cyclic; the dashed lines represent one carbon-carbon double bond or are absent; or R₇ or R₈ is alkyl, alkoxy, halo, or amino; and~~

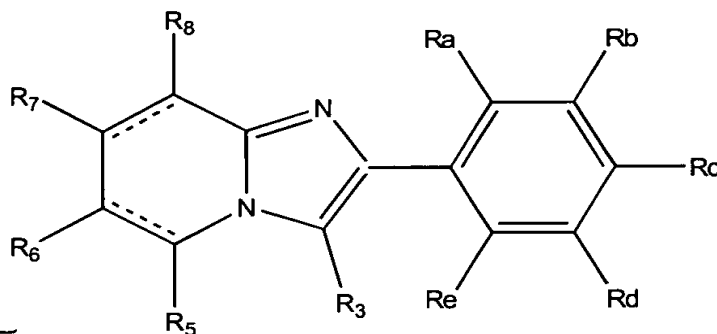
each of the above hydrocarbyl or heterocyclic groups being optionally substituted with between 1 and 3 substituents selected from C₁₋₃ alkyl, halo, hydroxy, C₂₋₅ heterocyclic radical, phenyl, and phenyl(C₁₋₃ alkyl); and wherein each of the above heterocyclic groups may be attached to the rest of the molecule by a carbon atom or a heteroatom;
 or a pharmaceutically acceptable salt, amide, ester, or hydrate thereof.

20 ~~24.~~ (currently amended) A method of claim ¹⁹23, wherein said compound is selected from 2-[4-[3-(Piperidino)propylamino]phenyl]-7-methylimidazo[1,2-a]pyridine;

(E/Z)-2-[4-[4-Piperidinobut-1-enyl]phenyl]-7-methylimidazo[1,2-a]pyridine; [4-(8-Methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-(2-pyrrolidin-1-yl-ethyl)-amine; [4-(8-Methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-(2-piperidin-1-yl-ethyl)-amine; 2-[4-[4-Pyrrolidinobutyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-[4-[2-(1-Methyl)-2-pyrrolidino]ethoxy-3-methylphenyl]imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-(4-Piperidinopropoxy-2-methylphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-Cycloheptylaminoethoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-[4-Piperidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Pyrrolidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-imidazo[1,2-a]pyridine; 2-[4-[4-Pyrrolidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(7-methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; 7-methyl-2-[2-methyl-4-(3-piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methyl-imidazo[1,2-a]pyridin-2-yl)-phenyl]-ethane-1,2-diamine; 2-(4-piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; and 2-(4-morpholinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine.

21 ¹⁹ 25. (original) A method of claim 23, wherein said compound is 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine.

22 26. (currently amended) A method for treating a patient with a central nervous system disorder, said method comprising administering to the patient a pharmaceutically-effective amount of a compound of formula (I):



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independently each completes
 wherein ~~both~~ dashed lines ~~are~~ a carbon-carbon double bond, or ~~both~~ are absent;

is
 R_3 is H, C₁₋₆ alkyl, phenyl, or benzyl;

each of R_5 , R_6 , R_7 and R_8 is independently H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, or amino;

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 one of R_a , R_b , R_c , R_d , and R_e is -WYZ and the others are independently selected from H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, and amino;

W is O- R_9 , wherein R_9 is C₁₋₆ alkylene, C₂₋₆ alkynylene, C₂₋₆ alkenylene, phenylene, or C₂₋₅ heterocyclic bivalent radical, and R_{10} is H, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, phenyl, or C₂₋₅ heterocyclic radical;

Y is absent, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, or C₁₋₆ alkoxy; Z is C₂₋₈ heterocyclic radical with at least one basic nitrogen atom in the ring, optionally including in the ring up to 3 additional heteroatoms or moieties independently selected from O, C=O, N, NH, NG, S, SO, and SO₂, wherein G is R_{15} , COR₁₅, COOR₁₅, SO₂R₁₅, SO₂N or CSR₁₅; and R_{15} is C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, C₃₋₇ cycloalkyl, or C₄₋₇ cycloalkenyl;

and

each of the above hydrocarbyl or heterocyclic groups being optionally substituted with between 1 and 3 substituents selected from C₁₋₃ alkyl, halo, hydroxy, C₂₋₅ heterocyclic radical, phenyl, and phenyl(C₁₋₃ alkyl); and wherein each of the above heterocyclic groups may be attached to the rest of the molecule by a carbon atom or a heteroatom;

or a pharmaceutically acceptable salt, amide, ester, or hydrate thereof.

27. (deleted)

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28. (original) A method of claim ²²26, wherein said central nervous system disorder is selected from sleep/wake disorders, arousal/vigilance disorders, dementia, Alzheimer's disease, epilepsy, narcolepsy, eating disorders, motion sickness, vertigo, attention deficit hyperactivity disorder, learning and memory disorders, mild cognitive impairment, and schizophrenia.

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29. (original) A method of claim ²²26, wherein said central nervous system disorder is selected from Alzheimer's disease, epilepsy, eating disorders, learning and memory disorders, migraine, sleep/wake disorders, allergic rhinitis, schizophrenia, mild cognitive impairment, and asthma.

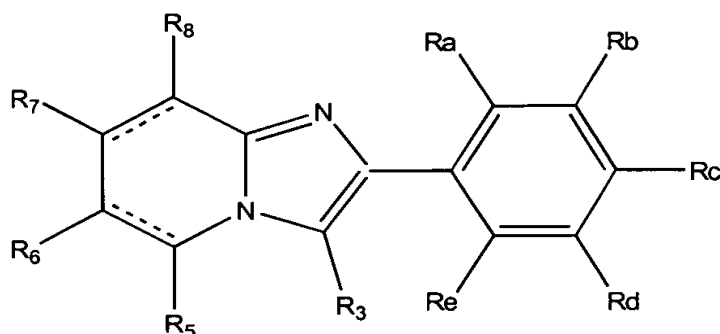
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30. (currently amended) A method of claim ²²26, wherein said compound is selected from 2-[4-[3-(Piperidino)propylamino]phenyl]-7-methylimidazo[1,2-a]pyridine; (E/Z)-2-[4-[4-Piperidinobut-1-enyl]phenyl]-7-methylimidazo[1,2-a]pyridine; [4-(8-Methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-(2-pyrrolidin-1-yl-ethyl)-amine; [4-(8-Methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-(2-piperidin-1-yl-ethyl)-amine; 2-[4-[4-Pyrrolidinobutyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-[4-[2-(1-Methyl)-2-pyrrolidino]ethoxy-3-methylphenyl]imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-(4-Piperidinopropoxy-2-methylphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-hexamethyleneimino-cycloheptylamino)propoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-[4-Piperidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Pyrrolidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-7-

methylimidazo[1,2-a]pyridine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-imidazo[1,2-a]pyridine; 2-[4-[4-Pyrrolidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(7-methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; 7-methyl-2-[2-methyl-4-(3-piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-ethane-1,2-diamine; 2-(4-piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; and 2-(4-morpholinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine.

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31. (original) A method of claim ²²~~26~~²⁷, wherein said compound is 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine.

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32. (original) A method of claim ²²~~26~~, wherein said disorder is selected from sleep/wake disorders, arousal/vigilance disorders, attention deficit hyperactivity disorder, and learning and memory disorders.

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33. (currently amended) A method for treating a patient with an upper airway allergic response, said method comprising administering to the patient a pharmaceutically-effective amount of a compound of formula (I):



independently each

completes

wherein ~~both~~ ^{is} ~~dashed lines~~ ^{are} a carbon-carbon double bond, or ~~both~~ ^{are} are absent;

R₃ is H, C₁₋₆ alkyl, phenyl, or benzyl;

each of R₅, R₆, R₇ and R₈ is independently H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, or amino;

one of R_a, R_b, R_c, R_d, and R_e is -WYZ and the others are independently selected from H, C₁₋₆ alkyl, C₁₋₆ alkoxy, halo, and amino;

W is R₉, O-R₉, NR₁₀, ~~(CO)(O)R₉~~, ~~N(R₁₀)SO₂R₉~~, ~~O(CO)R₉~~, ~~(CO)NR₁₀~~, or ~~N(R₁₀)CO-R₉~~, wherein R₉ is C₁₋₆ alkylene, C₂₋₆ alkynylene, C₂₋₆ alkenylene, phenylene, or C₂₋₅ heterocyclic bivalent radical, and R₁₀ is H, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, phenyl, or C₂₋₅ heterocyclic radical;

Y is absent, C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, or C₁₋₆ alkoxy;

Z is C₂₋₈ heterocyclic radical with at least one basic nitrogen atom in the ring, optionally including in the ring up to 3 additional heteroatoms or moieties independently selected from O, C=O, N, NH, NG, S, SO, and SO₂, wherein G is R₁₅, COR₁₅, COOR₁₅, SO₂R₁₅, SO₂N or CSR₁₅; or Z is NR₁₁R₁₂ where each of R₁₁ and R₁₂ is independently selected from H, C₁₋₆ alkyl, phenyl, benzyl, C₃₋₈ cycloalkyl, and C₂₋₅ heterocyclic radical; and R₁₅ is C₁₋₆ alkyl, C₂₋₆ alkynyl, C₂₋₆ alkenyl, C₃₋₇ cycloalkyl, or C₄₋₇ cycloalkenyl;

provided that where R₆ is WNR₁₁R₁₂, each of R₁₁ and R₁₂ being independently selected from C₁₋₆ alkyl, then at least one of the following is true: R_b or R_d is alkyl, alkoxy, amino, or halo; the dashed lines represent one carbon-carbon double bond or are absent; R_a or R_e is alkyl, alkoxy, amino, or halo; or W is R₉, NR₁₀, ~~(CO)(O)R₉~~, ~~O(CO)R₉~~, ~~(CO)NHR₉~~, or ~~N(R₁₀)(CO)R₉~~;

and further provided that where each of R_a, R_b, R_d, and R_e is H, and W is a straight chain, unsubstituted alkoxy, then at least one of the following is true: Z is cyclic; the dashed lines represent

~~one carbon-carbon double bond or are absent; or R₇ or R₈ is alkyl, alkoxy, halo, or amino; and~~

each of the above hydrocarbonyl or heterocyclic groups being optionally substituted with between 1 and 3 substituents selected from C₁₋₃ alkyl, halo, hydroxy, C₂₋₅ heterocyclic radical, phenyl, and phenyl(C₁₋₃ alkyl); and wherein each of the above heterocyclic groups may be attached to the rest of the molecule by a carbon atom or a heteroatom;

or a pharmaceutically acceptable salt, amide, ester, or hydrate thereof.

A-2
cont

29 34. (currently amended) A method of claim 28, wherein said compound is selected from 2-[4-[3-(Piperidino)propylamino]phenyl]-7-methylimidazo[1,2-a]pyridine; (E/Z)-2-[4-[4-Piperidinobut-1-enyl]phenyl]-7-methylimidazo[1,2-a]pyridine; [4-(8-Methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-(2-pyrrolidin-1-yl-ethyl)-amine; [4-(8-Methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-(2-piperidin-1-yl-ethyl)-amine; 2-[4-[4-Pyrrolidinobutyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-[4-[2-(1-Methyl)-2-pyrrolidino]ethoxy-3-methylphenyl]imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-(4-Piperidinopropoxy-2-methylphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-hexamethyleneimino-cycloheptylamino)propoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-[4-Piperidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Pyrrolidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-imidazo[1,2-a]pyridine; 2-[4-[4-Pyrrolidinobut-1-ynyl]phenyl]-7-methylimidazo[1,2-a]pyridine; 2-(4-Piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(7-methylimidazo[1,2-a]pyridin-2-yl)-phenyl]-propane-1,3-diamine; 2-[4-(3-Piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-imidazo[1,2-a]pyridine; 7-methyl-2-[2-methyl-

4-(3-piperidin-1-yl-propoxy)-phenyl]-5,6,7,8-tetrahydro-
imidazo[1,2-a]pyridine; N,N-Diethyl-N'-[4-(8-methyl-imidazo[1,2-
a]pyridin-2-yl)-phenyl]-ethane-1,2-diamine; 2-(4-
piperidinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine; and 2-
(4-morpholinopropoxyphenyl)-8-methylimidazo[1,2-a]pyridine.

h2
conf.

³⁰ 35. (original) A method of claim ²⁸ 33, wherein said compound is 2-(4-
Piperidinopropoxyphenyl)-7-methylimidazo[1,2-a]pyridine.